

Brca1-Flox

Nomenclature	C57BL/6Smoc- <i>Brca1</i> ^{tm1Smoc}
Cat. NO.	NM-CKO-18007
Strain State	Repository Live

Gene Summary

Gene Symbol Brca1	Synonyms	-
	NCBI ID	12189
	MGI ID	104537
	Ensembl ID	ENSMUSG00000017146
	Human Ortholog	BRCA1

Model Description

These Brca1 flox mice possess loxP sites flanking exons 5 . When crossed with a Cre recombinase-expressing strain, this strain is useful in eliminating tissue-specific conditional expression of the gene.

Research Application: cancer research

*Literature published using this strain should indicate: Brca1-Flox mice (Cat. NO. NM-CKO-18007) were purchased from Shanghai Model Organisms Center, Inc..

Disease Connection

Breast Cancer	Phenotype(s)	MGI:3805032 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Wap-cre mice.
	Reference(s)	Shakya R, Szabolcs M, McCarthy E, Ospina E, Basso K, Nandula S, Murty V, Baer R, Ludwig T, The basal-like mammary carcinomas induced by Brca1 or Bard1 inactivation implicate the BRCA1/BARD1 heterodimer in tumor suppression. Proc Natl Acad Sci U S A. 2008 May 13;105(19):7040-5

Hereditary Breast Ovarian Cancer Syndrome	Phenotype(s) MGI:2176786 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with P53-Flox(2)(NM-CKO-190067) and MMTV-cre mice.
	Reference(s) Xu X, Wagner KU, Larson D, Weaver Z, Li C, Ried T, Hennighausen L , Wynshaw-Boris A , Deng CX, Conditional mutation of Brca1 in mammary epithelial cells results in blunted ductal morphogenesis and tumour formation [see comments]. Nat Genet. 1999 May;22(1):37-43
hereditary breast ovarian cancer syndrome	Phenotype(s) MGI:5297134 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with P53-Flox(2)(NM-CKO-190067) and MMTV-cre mice.
	Reference(s) Jones LP, Tilli MT, Assefnia S, Torre K, Halama ED, Parrish A, Rosen EM, Furth PA, Activation of estrogen signaling pathways collaborates with loss of Brca1 to promote development of ERalpha-negative and ERalpha-positive mammary preneoplasia and cancer. Oncogene. 2008 Jan 31;27(6):794-802
Breast Cancer	Phenotype(s) MGI:3762186 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with P53-Flox(2)(NM-CKO-190067) and KRT14-cre mice.
	Reference(s) Liu X, Holstege H, van der Gulden H, Treur-Mulder M, Zevenhoven J, Velds A, Kerkhoven RM, van Vliet MH, Wessels LF, Peterse JL, Berns A, Jonkers J, Somatic loss of BRCA1 and p53 in mice induces mammary tumors with features of human BRCA1-mutated basal-like breast cancer. Proc Natl Acad Sci U S A. 2007 Jul 17;104(29):12111-6

breast cancer	Phenotype(s)	MGI:5307256 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with P53-Flox(2)(NM-CKO-190067) and KRT14-cre mice.
	Reference(s)	Drost R, Bouwman P, Rottenberg S, Boon U, Schut E, Klarenbeek S, Klijn C, van der Heijden I, van der Gulden H, Wientjens E, Pieterse M, Catteau A, Green P, Solomon E, Morris JR, Jonkers J, BRCA1 RING Function Is Essential for Tumor Suppression but Dispensable for Therapy Resistance. Cancer Cell. 2011 Dec 13;20(6):797-809
breast cancer	Phenotype(s)	MGI:3710355 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with LGB-cre mice.
	Reference(s)	McCarthy A, Savage K, Gabriel A, Naceur C, Reis-Filho JS, Ashworth A, A mouse model of basal-like breast carcinoma with metaplastic elements. J Pathol. 2007 Mar;211(4):389-98
breast cancer	Phenotype(s)	MGI:3805035 Note: The expected phenotype(s) may be observed in the above-mentioned mice that bred with Bard1-Flox(NM-CKO-2114115) and Wap-cre mice.
	Reference(s)	Shakya R, Szabolcs M, McCarthy E, Ospina E, Basso K, Nandula S, Murty V, Baer R, Ludwig T, The basal-like mammary carcinomas induced by Brca1 or Bard1 inactivation implicate the BRCA1/BARD1 heterodimer in tumor suppression. Proc Natl Acad Sci U S A. 2008 May 13;105(19):7040-5

Validation Data

No data